REMARKS

Reconsideration and withdrawal of the rejection of the claims, in view of the remarks herein, is respectfully requested. Claims 1-7, 12-23, 27-32, and 34 are pending.

In this regard, the Examiner is requested to reconsider the Rule 132 Declaration by Dr. Schultz-Cherry submitted on November 30, 2006. In that Declaration, Dr. Schultz-Cherry states that there are number of obstacles in designing a useful serological assay, e.g., recombinant expression of a particular protein may be difficult to achieve, or may not yield sufficient expression levels and/or may not yield a protein that is in a conformation that is recognized by antibodies present in physiological fluid of an animal that has seroconverted. Dr. Schultz-Cherry continues, noting that for a serological assay to be useful, the reagents and conditions must result in sufficient specific binding and low non-specific binding.

The Examiner is also requested to consider the signed Rule 132 Declaration enclosed herewith, which evidences the obstacles in designing a useful serological assay for turkey astrovirus-2. In the Declaration, Dr. Schultz-Cherry and Dr. Matthew Koci, co-inventors of the present application, state that they tried various systems to express turkey astrovirus-2 capsid protein (paragraph 7 in the Declaration). They found that yields using *in vitro* transcription/translation, transient expression in mammalian cell lines and expression in bacterial cells were generally poor and/or variable (paragraph 7 in the Declaration). Dr. Schultz-Cherry and Dr. Matthew Koci state that of the tested systems, the *in vitro* transcription/translation system produced the best results and was initially chosen for developing the serological assay (paragraph 7 in the Declaration). However, issues related to consistent antigen preparation led to concerns in the reproducibility of assays that employed capsid produced by *in vitro* transcription/translation to detect anti-turkey astrovirus-2 antibodies in serum (paragraph 7 in the Declaration).

An additional obstacle in developing a serological assay for turkey astrovirus-2 related to the amount, oand/or affinity for turkey astrovirus-2 capsid, of anti-turkey astrovirus-2 antibodies found in physiological samples (paragraphs 6, 8 and 9 in the Declaration). Dr. Schultz-Cherry and Dr. Matthew Koci disclose that of the antigens tested, only turkey astrovirus-2 capsid expressed in insect cells reproducibly and specifically detected anti-turkey astrovirus-2 antibodies in serum.

The Examiner appears to employ impermissible hindsight to arrive at Applicant's invention, picking detection of turkey astrovirus-2, rather than human astrovirus, influenza virus or avian pneumovirus, choosing a serological rather than an antibody (capture) based assay or a nucleic acid-based assay, and choosing recombinant viral protein-expressing cells rather than purified recombinant *E. coli* antigens or solubilized recombinant antigens from insect cells. Nevertheless, there is no combination of the cited documents that discloses, suggests, provides the motivation for, or the reasonable expectation of success of, the use of insect cells, e.g., fixed insect cells, expressing turkey astrovirus-2 capsid protein in a serological assay.

Accordingly, withdrawal of the § 103 rejection is respectfully requested.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6959 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date June 14, 2007 By
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 14th day of June 2007.

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Signature